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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,899	09/27/2000	Makiko Endo	35.C14832	4427

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EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/669,899

Applicant(s)

ENDO ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 9/5/03.

The new grounds of rejection as set forth below are necessitated by applicants' amendment and thus, the following action is final.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-4, 7-11, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 55139741 in view of EP 130789.

JP 55139471, an English translation of which is included in this office action, discloses ink jet ink comprising colored polymer dispersed in aqueous medium wherein the colored polymer comprises acrylic polymer and disperse dye wherein the dye is dispersed in the polymer followed by heating.

While JP 55139471 discloses that the ink is printed using ink jet printer and that the ink is ejected through nozzle onto substrate, there is no explicit disclosure that the ink is ejected through nozzle in correspondence with recording signal or that the printer comprises ink cartridge or container for holding the ink. However, given that JP 55139471 discloses ink jet printer, it is clear that these are inherent features of any ink jet printer. That is, an ink jet printer

would inherently contain cartridge or container for ink and the ink would inherently be ejected in response to signal.

Further, while JP 55139471 discloses that the disperse dye is impregnated in the polymer, there is no explicit disclosure that the dye is sublimated to the polymer, given that the polymer is dyed by adding dye to polymer and then heating, it is clear that in using this process, the dye would inherently sublimate.

The difference between JP 55139471 and the present claimed invention is the requirement in the claims of minimum film-forming temperature of the acrylic polymer.

EP 130789, which is drawn to ink jet ink, disclose the use of a colored polymer which has film-forming temperature less than 35⁰ C in order to produce an ink with excellent water resistance which produces a continuous film (page 19, lines 10-15 and col.17, lines 15-29).

In light of the motivation for using polymer with specific minimum film-forming temperature disclosed by EP 130789 as described above, it therefore would have been obvious to one of ordinary skill in the art to control the minimum film-forming temperature of the polymer of JP 55139471 in order to produce an ink with excellent water resistance, and thereby arrive at the claimed invention.

4. Claims 1, 3-4, 11, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Keaveney et al. (U.S. 5,114,479) in view of EP 130789.

Keaveney et al. disclose ink comprising oil-soluble dye or disperse dye in an acrylic latex (col.1, lines 64-67, col.2, lines 23-28 and 61-63, col.3, lines 20-24, and col.5, lines 25-36).

Although there is no explicit disclosure that the dye is sublimated and penetrated to the film-forming polymer, given that the polymer is dyed by adding dye to polymer and then heating with mixing, it is clear that in using this process, the dye would inherently sublimate and penetrate into the polymer.

The difference between Keaveney et al. and the present claimed invention is the requirement in the claims of minimum film-forming temperature of the acrylic polymer.

EP 130789, which is drawn to ink jet ink, disclose the use of a colored polymer which has film-forming temperature less than 35⁰ C in order to produce an ink with excellent water resistance which produces a continuous film (page 19, lines 10-15 and col.17, lines 15-29).

In light of the motivation for using polymer with specific minimum film-forming temperature disclosed by EP 130789 as described above, it therefore would have been obvious to one of ordinary skill in the art to control the minimum film-forming temperature of the polymer of Keaveney et al. in order to produce an ink with excellent water resistance, and thereby arrive at the claimed invention.

Response to Arguments

5. Applicants' arguments filed 9/5/03 have been fully considered but they are not persuasive.

Specifically, applicants argue that there is no motivation to combine either JP 55139741 or Keaveney et al. with EP 130789 given that EP 130789 discloses colored polymer formed from different coloring mechanism than that disclosed by either JP 55139741 or Keaveney et al.

However, applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." EP 130789 is, therefore, a reasonably pertinent reference, because it teaches that colored polymer possessing minimum film-forming temperature less than 35 °C produces ink with excellent water resistance and rub resistance which is a function especially pertinent to the invention at hand.

Further, although the colored polymer of EP 130789 is made from different mechanism than the colored polymer disclosed by either JP 55139741 or Keaveney et al., one of ordinary skill in the art would recognize that regardless of how the colored polymer is formed, the fact remains that it is important that the colored polymer possess minimum film-forming temperature of less than 35 °C as discussed above.

Additionally, it is significant to note that the minimum film-forming temperature is not controlled by the coloring mechanism but by the type of polymer utilized. That is, the minimum film-forming temperature is controlled by the type and amount of monomers used to form the polymer, not the coloring mechanism.

Applicants also argue that the motivation for using polymer with minimum film-forming temperature of less than 35 °C in EP 130789 is improvement in flexibility, which is different than the goals of the present invention.

However, page 17, lines 7-29 of EP 130789 disclose that it is important to have minimum film-forming temperature of not higher than 35 °C in order to produce ink with water resistance and rub resistance. If the minimum film-forming temperature is higher, printing recording, or writing of the ink is impossible at normal temperatures.

Further, even if the only motivation disclosed by EP 130789 for using colored polymer with specific minimum film-forming temperature was flexibility, while this motivation may not be the same motivation as in the present invention, it is noted that obviousness under 103 is not negated because the motivation to arrive at the claimed invention as disclosed by the prior art does not agree with appellant's motivation. *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1990), *In re Tomlinson*, 150 USPQ 623 (CCPA 1996).

It is noted that the present specification provides comparative data wherein the ink within the scope of the present claims, i.e. comprising polymer with minimum film-forming temperature as claimed (example 1), is compared with ink outside the scope of the present claims, i.e. comprising polymer with minimum film-forming temperature outside scope of claims (comparative example 1). It is shown that the inks of the present invention are superior in terms of transparency, ozone resistance, water resistance, and rub resistance. However, this data is not persuasive given that EP 130789 already discloses the criticality of using polymer with minimum film-forming temperature of less than 35 °C. Page 17 of EP 130789 discloses using polymer with minimum film-forming temperature less than 35 °C in order to produce ink with good water

resistance and rub resistance while the inventive examples of EP 130789 disclose that the formed film is transparent and clear.

In light of the above it is the examiner's position that the combination of either JP 55139741 or Keaveney et al. with EP 130789 is proper.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

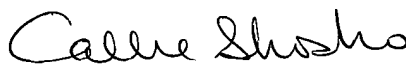
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
12/3/03